WHAT IS CLAIMED IS:

1. A vascular pressure waveform detecting device, comprising:

at least one sensor usable to sense a vascular pressure waveform;

a sensor case housing each of the at least one sensor;

a sensor holding member to which the sensor case is secured; and

a damping element for the waveform detecting device, the damping element reducing distortion in the vascular pressure waveform sensed by the vascular pressure waveform detecting device.

2. The vascular pressure waveform detecting device according to claim 1, wherein an increase in damping of the damping element reduces distortion in the vascular pressure waveform.

3. The vascular pressure waveform detecting device according to claim 1, further comprising a spring within the sensor holding member, the spring usable to urge the at least one sensor towards a vascular area of a living being, the spring having at least one of a variable spring constant and variable rest position.

4. The vascular pressure waveform detecting device according to claim 1, wherein:

the at least one sensor has a mass; and

a change in the mass of the at least one sensor reduces distortion in a vascular pressure waveform sensed by the at least one sensor.

5. The vascular pressure waveform detecting device according to claim 1, wherein:

the sensor holding member has a mass; and

a change in the mass of the sensor holding member reduces distortion in a vascular pressure waveform sensed by the at least one sensor.

6. The vascular pressure waveform detecting device according to claim 3, wherein the spring provides reduced distortion in the vascular waveform sensed.

7. A method of determining vascular conditions of a living being, comprising:

identifying physiologic characteristics of the living being;

determining an augmentation index value for the living being based on the physiological characteristics identified;

measuring a vascular pressure waveform of the living being using a distortion-reducing vascular pressure waveform detecting device;

determining a measured augmentation index value of the living being from the vascular pressure waveform measured with the distortion-reducing vascular pressure waveform detecting device; and

determining a difference between the measured augmentation index value of the living being and the determined augmentation index value for the living being; and

comparing the difference to an acceptable range of difference for the living being.

8. The method of claim 7, wherein generating the vascular pressure waveform using the distortion reducing vascular pressure waveform detecting device comprises using a distortion reducing vascular waveform detecting device comprising:

at least one sensor usable to sense a vascular pressure waveform;

a sensor case housing each of the at least one sensor;

a sensor holding member to which the sensor case is secured; and

a damping element for the waveform detecting device, the damping element reducing distortion in the vascular pressure waveform sensed by the vascular pressure waveform detecting device.

9. The method of claim 8, further comprising reducing distortion in the vascular pressure waveform by increasing damping provided by the damping element.

10. The method of claim 8, further comprising reducing distortion in the vascular pressure waveform by increasing a spring constant or changing a rest position of a spring that is provided within the sensor holding member and that urges the at least one sensor towards or against a vascular area of a living being.

11. The method of claim 8, further comprising reducing distortion in the vascular pressure waveform by increasing a mass of at least one of the at least one sensor, the sensor case and the sensor holding member.

12. A method of determining vascular conditions of a living being, comprising:

identifying physiologic characteristics of the living being;

determining a pulse wave velocity value for the living being based on the physiological characteristics identified;

generating one of an electrocardiogram and a phonocardiogram of the living being;

generating a waveform based on the generated one of the electrocardiogram and the phonocardiogram;

generating a vascular pressure waveform of the living being using a distortion-reducing vascular pressure waveform detecting device;

comparing the vascular pressure waveform to the generated one of the electrocardiogram waveform and the phonocardiogram waveform to identify a physiological occurrence common to both of the compared waveforms;

determining a first physical location in the living being where the common physiological occurrence shown in one of the two compared waveforms occurs;

determining a second physical location in the living being where the common physiological occurrence shown in the other of the two compared waveforms occurs;

determining a difference in time between the occurrence of the common physiological occurrence in each of the compared waveforms;

determining a pulse wave velocity based on a distance between the first and second locations and the difference in time; and

comparing the pulse wave velocity value to the determined pulse wave velocity for the living being.

13. The method of claim 12, wherein generating the vascular pressure waveform using the distortion reducing vascular pressure waveform detecting device comprises using a distortion reducing vascular pressure waveform detecting device comprising:

at least one sensor usable to sense a vascular pressure waveform;

a sensor case housing each of the at least one sensor;

a sensor holding member to which the sensor case is secured; and

a damping element for the waveform detecting device, the damping element reducing distortion in the vascular pressure waveform sensed by the vascular pressure waveform detecting device.

14. The method of claim 13, further comprising reducing distortion in the vascular pressure waveform by increasing damping provided by the damping element.

15. The method of claim 13, further comprising reducing distortion in the vascular pressure waveform by increasing a spring constant or changing a rest position of a spring that is provided within the sensor holding member and that urges the at least one sensor towards or against a vascular area of a living being.

16. The method of claim 13, further comprising reducing distortion in the vascular pressure waveform by increasing a mass of at least one of the at least one sensor, the sensor case and the sensor holding member.

17. A method of making a vascular waveform detecting device, comprising:

devising simplified mechanical models of the detecting device;

devising simplified mechanical models of physiological tissues corresponding to designated areas of a living being;

combining the simplified mechanical models of the detecting device and the living being to yield a system model of the designated areas of the living being and the detecting device;

using intra-vascular pressure waveform data as an input to drive the system model;

using the system model to simulate the measurement of a vascular pressure waveform of a living being;

comparing the simulated measured waveform to the input waveform to determine waveform distortion;

determining whether the waveform distortion is acceptable for reliable medical use; and

making modifications to the detecting device to render the detecting device more reliable for medical use.

18. The method of claim 17 wherein making modifications to the detecting device reduces the distortion in the measured waveform.

19. The method according to claim 17, wherein the simplified models of the detecting device and the physiological tissues comprise at least some of springs, masses and dampers.

20. The method of claim 17, wherein the detecting device comprises:

at least one sensor usable to sense a vascular pressure waveform;

a sensor case housing each of the at least one sensor; and

a sensor holding member to which the sensor case is secured.

21. The method of claim 20, wherein waveform distortion is reduced by increasing damping associated with the sensor holding member.

22. The method of claim 20, wherein waveform distortion is reduced by at least one of increasing a spring constant and changing a rest position of a spring associated with the sensor holding member.

23. The method of claim 20, wherein waveform distortion is reduced by increasing a mass of at least one of the at least one sensor, the sensor case and the sensor holding member.